

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A synthetic middle distillate cut comprising more than 50 mass% paraffins lighter than C<sub>16</sub> and in which more than 50 mass% of ~~[[all]]~~ the total paraffins of the middle distillate cut are isoparaffins, and wherein the isoparaffins ~~[[are]]~~ being predominantly methyl and/or ethyl and/or propyl branched wherein  
a C<sub>10</sub> to C<sub>18</sub> fraction of the synthetic middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of between 1:1 and 9:1;  
a C<sub>8</sub> to C<sub>9</sub> fraction of the synthetic middle distillate cut has a mass ratio range of isoparaffins to n-paraffins lower than that of the C<sub>10</sub> to C<sub>18</sub> fraction; and  
a C<sub>19</sub> to C<sub>24</sub> fraction of the synthetic middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of from 3.3:1 and 5:1.
2. (Currently Amended) A synthetic middle distillate cut as claimed in claim 1, wherein the ~~gradient of an~~ isoparaffins to n-paraffins mass ratio profile of the synthetic middle distillate cut increases from about 1:1 for C<sub>8</sub> to 8.54:1 for C<sub>15</sub> and decrease again to about 3:1 for C<sub>18</sub>.
- 3-5. (Canceled)
6. (Currently Amended) A synthetic middle distillate cut as claimed in claim ~~[[5]]~~ 2, wherein the C<sub>19</sub> to C<sub>24</sub> fraction of the middle distillate cut has a mass ratio range of isoparaffins to n-paraffins of between 4:1 and 4.9:1.
7. (Currently Amended) A synthetic middle distillate cut as claimed in claim ~~[[3]]~~ 2 which comprises 30 mass% of a straight run component thereby selecting the isoparaffins to n-paraffins mass ratio of the C<sub>10</sub> to C<sub>18</sub> fraction to between 1:1 and ~~[[2:5:1]]~~ 2.5:1.

8. (Currently Amended) A synthetic middle distillate cut as claimed in claim ~~[[3]]~~ 2, which comprises 20 mass% of a straight run component thereby selecting the isoparaffins to n-paraffins mass ratio of the C<sub>10</sub> to C<sub>18</sub> fraction to between 1.5:1 and ~~[[3:5:1]]~~ 3.5:1.
9. (Currently Amended) A synthetic middle distillate cut as claimed in claim ~~[[3]]~~ 2, which comprises 10 mass% of a straight run component thereby selecting the isoparaffins to n-paraffins mass ratio of the C<sub>10</sub> to C<sub>18</sub> fraction to between 2.3:1 and 4.3:1.
10. (Previously Presented) A synthetic middle distillate cut as claimed in claim 3, wherein the isoparaffins to n-paraffins mass ratio of the C<sub>10</sub> to C<sub>18</sub> fraction having substantially only a hydrocracked component is between 4:1 and 9:1.
11. (Previously Presented) A middle distillate cut as claimed in claim 1, wherein at least some of the isoparaffins are di-methyl branched.
12. (Previously Presented) A middle distillate cut as claimed in claim 1, wherein at least 30 mass% of the isoparaffins are mono-methyl branched.
13. (Previously Presented) A middle distillate cut as claimed in claim 1, wherein at least some of the isoparaffins are ethyl branched.
14. (Currently Amended) A middle distillate cut as claimed in claim 1, wherein the ratio of isoparaffins to n-paraffins of the middle distillate cut is from about 1:1 to about ~~[[12:1]]~~ 9:1.
15. (Previously Presented) A synthetic middle distillate cut as claimed in claim 14, wherein the isoparaffins to n-paraffins mass ratio is between about 2:1 to about 6:1.
16. (Previously Presented) A synthetic middle distillate cut as claimed in claim 15, wherein the isoparaffins to n-paraffins mass ratio is 4:1.

17. (Currently Amended) A synthetic middle distillate cut as claimed ~~in claim 3~~ in claim 1, having a light fraction in the boiling range 160°C to 270°C wherein the isoparaffins to n-paraffins mass ratio of the light fraction is from 1:2 to 4:1.

18. (Previously Presented) A synthetic middle distillate cut as claimed in claim 17, having the light fraction in the boiling range 160°C to 270°C wherein the isoparaffins to n-paraffins mass ratio of the light fraction is 2.2:1.

19. (Currently Amended) A synthetic middle distillate cut as claimed in claim ~~[[3]]~~ 1, having a heavy fraction in the boiling range 270°C to 370°C wherein the isoparaffins to n-paraffins mass ratio of the heavy fraction is from 4:1 to ~~[[14:1]]~~ 5:1.

20. (Canceled)

21. (Currently amended) A synthetic middle distillate cut as claimed in ~~claim 1~~ claim 1, wherein the synthetic distillate is derived from one or more FT primary product.

22-58. (Canceled)